

**Amendment and Response**

Clinton WALLER Jr. et al.

Serial No.: 08/892,902

Filed: 14 July 1997

For: MICROPOROUS INKJET RECEPTORS CONTAINING BOTH A PIGMENT MANAGEMENT SYSTEM & A FLUID MANAGEMENT SYSTEM

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**1. (Amended)** An inkjet receptor medium comprising:

C1  
a porous substrate having a fluid management system and a pigment management system in contact with surfaces of pores of the substrate, wherein the pigment management system comprises functionalized particulates within the pores of the porous substrate and the fluid management system comprises a surfactant [that carries away an ink passing through the substrate except for pigment particles in the ink].

**16. (Amended)** A method of making an inkjet receptor medium comprising:

- C2
- (a) preparing a pigment management system;
  - (b) imbibing the pigment management system into pores of a porous substrate, wherein the pigment management system once imbibed into the pores comprises functionalized particulates within the pores of the porous substrate; and
  - (c) imbibing a fluid management system into the pores of the porous substrate wherein the fluid management system comprises a surfactant [that carries away an ink passing through the substrate except for pigment particles in the ink].

**18. (Amended)** A method of using an inkjet receptor medium comprising:

- C3
- (a) placing an inkjet receptor medium of claim 1 in an inkjet printer; and
  - (b) printing an image on the medium using inkjet ink, wherein the inkjet ink comprises pigment particles [that are agglomerated using the pigment management system and fluid is passed through pores of the porous substrate using the fluid management system].

**19. (Amended)** The method according to Claim 18, wherein the inkjet ink further comprises a dispersant [and further wherein the pigment management system comprises functionalized particulates within the pores that chemically interact with the pigment particles through interaction with dispersants surrounding the pigment particles].

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22. (Amended) An inkjet receptor medium comprising:

C4  
SUB  
D1

a porous membrane of a synthetic polymer having a fluid management system and a pigment management system in contact with surfaces of pores of the substrate, wherein the pigment management system comprises a[n inorganic] multivalent metal salt coating along the surfaces of the porous substrate, and wherein the fluid management system comprises an anionic surfactant [a surfactant that carries away an ink passing through the substrate except for pigment particles in the ink].

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C7

25. (Amended) The medium according to Claim <sup>15</sup>22, wherein the [inorganic] multivalent metal salt coating comprises a[n inorganic] multivalent salt of cations derived from the elements of Group II and above in the Periodic Table within conditions of solubility rules, wherein the salt comprises a single salt or a binary salt or a ternary salt containing counterions selected from the group consisting of nitrate, nitrite, sulfate, sulfite, bisulfite, alkanesulfonate, fluoroalkanesulfonates, perchlorate, halide, pseudo-halides, acetate, propionate, and combinations thereof.

SUB  
E2

29. (Amended) The medium according to Claim 22, wherein the anionic surfactant is selected from the group consisting of fluorocarbon, silicon, hydrocarbon-based surfactants or a mixture thereof.

Q4  
SUB  
D3

30. (Amended) The medium according to Claim [29, wherein the surfactant comprises] 1, further comprising a silicon-based non-ionic surfactant.

SUB  
E4

31. (Amended) The medium according to Claim 29, wherein the anionic surfactant comprises a hydrocarbon surfactant of a fatty acid.

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33. (Amended) A method of making an inkjet receptor medium comprising:

- 34<sup>B</sup>  
Dy
- (a) preparing a pigment management system;
- (b) imbibing the pigment management system into pores of a porous membrane of a synthetic polymer, wherein the pigment management system once imbibed into pores of the porous membrane comprises a [n inorganic] multivalent metal salt coating along the surfaces of the pores of the porous substrate; and
- C 7 (c) imbibing a fluid management system into the pores of the porous membrane wherein the fluid management system comprises an anionic surfactant [a surfactant that carries away an ink passing through the substrate except for pigment particles in the ink].

24  
34. (Amended) A method of using an inkjet receptor medium comprising:

- (a) placing an inkjet receptor medium of claim <sup>15</sup>22 in an inkjet printer; and
- (b) printing an image on the medium using inkjet ink, wherein the inkjet ink comprises pigment particles [that are agglomerated using the pigment management system and fluid is passed through pores of the porous substrate using the fluid management system].

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35. (Amended) The method according to Claim <sup>24</sup>34, wherein the inkjet ink further comprises a dispersant [and further wherein the pigment management system comprises functionalized particulates within the pores that chemically interact with the pigment particles through interaction with dispersants surrounding the pigment particles].

C 8 [Please add the following claims:]

37. (New) An inkjet receptor medium comprising a porous substrate comprising functionalized particulates and a surfactant in contact with surfaces of pores of the porous substrate.

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